

## **ATTACHMENT 2:** **Mission Statements and Key Initiatives Related to the Advancement of Theory-Based Formative Research**

### **Mission Statements**

Across the Behavioral Research Program, many Branches engage in theory-based, formative research designed to further the mission of the National Cancer Institute. The mission statements of these Branches, and the initiatives they support, reflect this purpose.

#### **The Basic Biobehavioral and Psychological Sciences Branch (BBPSB)**

**Mission:** The Basic Biobehavioral and Psychological Sciences Branch (BBPSB) advances research in biobehavioral mechanisms and psychological processes to reduce cancer risk and improve outcomes.

**Scientific Priorities:** The BBPSB research agenda includes, but is not limited to:

- Basic mechanisms of cognition, emotion, judgment, and decision making
- Biological mechanisms of psychosocial influences on cancer biology and outcomes
- Methodology and measurement of basic psychological, cognitive, and affective processes
- Biobehavioral mechanisms of comorbidities associated with cancer and cancer treatment
- Basic mechanisms of sensation, attention, and perception as related to cancer risk and control
- Basic mechanisms of the placebo effect

#### **The Health Communication and Informatics Research Branch (HCIRB)**

**Mission:** To advance research on the processes and effects of communication and informatics across the cancer control continuum.

**Scientific Priorities:** HCIRB is dedicated to advancing the research and development of communications and technology infrastructure that increases access to and use of cancer information, improves consumer understanding of cancer information, enhances patient-provider interaction, and translates research discoveries into clinical and public health practice.

HCIRB's research priorities include:

- Communication Science Research
  - o Improve the interface between science, media, journalism, and clinical care
  - o Raise cancer control awareness and knowledge by improving access to and understanding of cancer information
  - o Investigate the impact of the changing media and journalism environment on knowledge and attitudes towards cancer prevention and control
  - o Evaluate communication processes for patient-centered care
- Technology-Mediated Communication Research
  - o Support the adoption of innovative, evidence-based, multi-level interventions through emerging technologies and communication platforms including the web, mobile, and social media

- o Improve cancer-related communication and care coordination for patients and caregivers
- o Encourage research and translation of evidence-based innovations in communication and health information technology (HIT) for cancer control

**The Science of Research and Technology Branch**

**Mission:** The Science of Research and Technology Branch (SRTB) leads and supports the development and application of innovative research approaches, theories, methods, measures, analytic tools, and technologies to advance social and behavioral science in the context of cancer prevention and control.

**Scientific priorities include, but are not limited to:**

- Theory development, testing and application;
- Measure development and testing, particularly of antecedents to, changes in, and consequences of health behavior;
- Technology development and application;
- Methodological innovation, particularly in analytic approaches;
- Data harmonization and research synthesis; and
- Team science and cross-disciplinary approaches.

**Key Initiatives**

Several ongoing key initiatives across the Behavioral Research Program are explicitly dedicated to the advancement of theory-based research to elucidate psychological and behavioral processes underlying cancer risk, prevention, and control behaviors. These initiatives rely on a combination of internal, formative research, as well as on funding opportunities for the extramural community that build on ideas generated during such formative research.

**Basic and Applied Decision Making**

As health care decisions become more of a collaborative effort between patient and provider, patients are increasingly expected to assume greater responsibility for their health decisions. The objective of this research initiative is to enhance understanding of decision-making processes so that individuals can make more informed and effective choices regarding their health, health care and quality of life.

**Specific aims:** To encourage:

- Research that examines the cognitive and affective processes underlying decision making;
- Research on basic decision-making processes involved in the initiation and long-term maintenance of healthy lifestyle behaviors that may reduce one's risk of cancer and other chronic diseases;
- Research that examines the construction and stability of preferences for treatment and treatment outcomes
- Research that explores how the dynamics of real-world settings influence judgment and decision-making processes
- Basic and applied research that examines health-related numeracy - how people use, process and attach meaning to health-related numeric information
- Research that examines the consequences of shared decision making

### **Theories Project: Improving Theories of Health Behavior**

The goal of the Theories Project is to identify and carry out activities that will help develop improved theories of health behavior. Its focus is on actions that individuals can take to prevent cancer and speed its early detection. The literature on health behavior is large, but progress in understanding health behaviors and in learning how to encourage such actions is not always apparent. Among the activities that may be considered are training in theory development and testing for health behavior researchers who lack such training, recruiting scientists with strong theory orientations to cancer behavior research, development of state-of-the-art summaries of theory-relevant topics when these are lacking, and better communication of opportunities for theory-focused research among current types of NCI grants.

### **Network on Biobehavioral Pathways in Cancer**

**Mission:** The National Cancer Institute Network on Biobehavioral Pathways in Cancer accelerates the translation and communication of biobehavioral discoveries to advance clinical cancer care. The Network fosters research excellence through the integration and dissemination of relevant scientific discoveries and the identification, support, and communication of new research directions in the field of biobehavioral pathways in cancer.

**Vision:** The National Cancer Institute Network on Biobehavioral Pathways in Cancer will be a "tipping point" for new therapeutic approaches to cancer care and a valuable resource for scientists, oncologist, physicians, patients, media, and the general public.

#### **Network Priorities:**

- To enhance understanding and influence perception of the value and importance of biobehavioral research in clinical cancer care.
- To expand the understanding of pathways linking behavioral processes and cancer.
- To showcase by example the value of collaborative research that links basic and applied science in cancer biology and behavioral research.
- To support the facilitation, development, and publication of high quality inter-disciplinary biobehavioral research.

### **Affective and Decision Science Perspectives on Cancer Prevention and Control**

**Overview and Objectives:** Recent strategic planning efforts have highlighted the importance of research that elucidates the role of affect, and specifically emotion, in cancer control. Such research may have important theoretical and clinical implications for the reduction of cancer risk and the improvement in cancer outcomes. Scientific evidence from a variety of domains suggest that affect may be a critical determinant of information processing, sensory perceptions, judgment and decision-making, cancer prevention and health promotion behaviors, and cancer outcomes. However, additional research is needed on the nature of affective phenomena, including the associations among affect and other processes/outcomes, as well as to identify underlying biological and psychological mechanisms. It is critical for us to gain a better understanding of the nature and utility of psychological experiences like stress, emotion, emotion regulation, and resilience.

**Specific Aims:** The Basic Biobehavioral and Psychological Sciences Branch (BBPSB) seeks to advance innovative affective science research that has potential downstream benefits for cancer prevention and control. Basic biobehavioral and psychological science related to cancer-related outcomes may include the following areas of examination:

- Affective states as they relate to judgments and decisions relevant to cancer (e.g., cancer risk behaviors such as poor energy balance and tobacco use; informed consent; clinical cancer care; response to placebo conditions in cancer clinical trials; cancer communication)
- Affective responses to social experiences and potential influences on biological processes associated with cancer progression and outcome
- Affect in cancer survivorship experiences and trajectories
- Affective phenomena (e.g., emotion, stress, mood) and mechanisms by which these may influence cancer outcomes
- Associations among affect and cognition, social cognition, expectancy, hedonics, sensation, and perception